

ABSTRACT

In a lithographic apparatus the angle dependence of the intensity distribution of a projection beam at a substrate is controlled. A beam splitter is located in the beam near a pupil plane. The beam splitter splits off an auxiliary beam, which is used to measure information about the spatial intensity distribution of the beam at the pupil plane. The measured position dependence in the auxiliary beam may be deconvoluted using boundary conditions inherent to the illuminator to compensate for offset between the pupil plane and a detection element. The measured position dependence may be used to control parameters of an optical element that manipulates the position dependence in the pupil plane. An example of such an optical element is a matrix of elements that controllably steer the direction of parts of the beam. Thus a continuous feedback loop may be realized.